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STATISTICS

OF

THE DISTRICT OF BEHAR,

BY

CAPTAIN SHERWILL,

REVENUE SURVEYOR.

1858

9/5,41 St
Sk 554 B

3649

N OF ZILLAH BEHAR.

PPY CULTIVATION.							POPULATION.		
Bee-Pop-on.	Amount of Opium produce.				General produce of the Zillah.	Soils in the order of their value.	Names of Thannahs.	Number of Houses.	REMARKS.
L.	B.	Maunds.	S.	C.	T.				
1	0	446	2	1	0	Wheat, rice, barley, poppy, murooa, kesaree, junera, saf-	Daoodnuggur,.....	12575	The animals of the jungles are,—
6	6	195	22	13	0	flower, arhur dal, Indian-corn, maize, and all vetches *in great*	Mujeeanwan, ...	4217	CARNIVORA.
..	...	.....	...	...	...	*abundance;* besides tal or fan-	Urwul, ...	7889	Tigers, leopards, jackals, wolves, hyenas, cats, mungoose, spotted tiger cat, fox, otters, wild dog.
1	13	48	21	8	1	leafed palm, and date, from which tarree, or toddy, an intoxicating	Behar, ...	16519	NOT CARNIVORA.
4	10	6	38	15	2	liquor is extracted and largely consumed.	Jehanabad,.....	16374	Bears, monkeys, baboons, squirrels, hog, pangolin, badger or ratel, bandicoot, hares, field mice, muskshews, rats.
9	13	17	23	2	3	*In moderate quantities*, kodo, bajra, china gram, pease, rape	Gya, ...	50838	STAGS AND ANTELOPES.
	7	471	27	0	1	and mustard, til or sesamun, lin-	Sherghotty, ...	33652	Samber, axis, or spotted deer, hog-deer, barking deer, four horned ante-
	11	6	9	10	2	seed, castor, sugar-cane, tobacco, ganja or hemp, indigo, turmeric,	Newadeh, ...	27159	lope, antelope, mouse deer, ravine antelope, neelgao.
	2	35	10	13	0	ginger, betel leaf, dhuniya, onions.	Nubbeenuggur, ...	11994	BIRDS.
	0	33	10	4	0	*Scarce*, garlic, potatoes, yams, ajwine, sougph.	Ourungabad, ...	22095	Peafowl, jungle fowl, grey partridge, black partridge, double spurred partridge, painted partridge, corn quail, rain or bush quail, button quail, snipe, hornbills of three kinds, eagles, hawks, doves of several kinds, pigeons, green pigeons or hurrial, minas, bulbul, cuckoo, parrots, paroquets, geese, ducks, teels, spoonbills, cranes, storks, adjutants, coolen, sarus, plover, pewit, terus of several kinds, fishing eagles, vultures two kinds, kites, and a variety of honey-birds, bee-catchers, tailorbirds, woodpeckers, crows, ravens, great horned owl, smaller owl, and small owl, hoopoes, ortolan, kingfishers three kinds, starling, goatsuckers, goggle-eyed plovers in the hills, sparrows, honey-suckers or humming birds two kinds, paddy birds many kinds, gulls.
	...	.....	...	...	...	The jungles produce muhooa			
	5	52	39	0	0	trees and their petals are used for making a powerful spirit,			
	2	14	37	1	0	timber, bamboos, grass, talc or mica building stone, reddle, or			
	4	133	10	15	0	red chalk, tusser silk, vegetable poisons, barks, medicinal roots,			
	4	26	14	9	1	gums and resins.			
	0	371	21	1	3	DOMESTICATED ANIMALS OF BEHAR.			
	8	145	4	1	1	*Very scarce*, horses, tattoos,			
	18	68	24	1	0	or ponies, elephants.			
	18	72	13	7	2	*Plentiful*, oxen, cows, goats, sheep, buffaloes, asses, poultry, pigeons.			SNAKES.
	2	377	3	15	2				Boa-constrictor, copra, huraeet, copra manil, dhamun, water snakes, line-tailed tree snakes.
	1	2	3	12	2				LIZARDS, &c.
	15	566	3	10	3				Biskopra, bloodsuckers, gecko rain lizards, short-legged lizards, (resembles a snake in its movements,) gohsaup which reaches to 6 feet in length, alligators, both long and short snouted, turtle.
	5	579	22	2	0				Fish of the Soane, Koel, and other rivers—mahaseer, kalabaus, savulee, booalee, trout, rohu, pufta, chulwa, crabs, shrimps, and a great variety of fish whose names are not known.
	0	88	29	3	2				
	4	48	38	13	0				
	.	.....	...	...	...				
	7	781	38	7	3				
	1	106	30	3	2				
		4807	20	11	2			203312	

WALTER S. SHERWILL, *Captain,*
Revenue Surveyor.

H. L. THUILLIER,
Offg. Depy. Surveyor General.

Number.	Names of Pergunnahs.	Number of Hulkahs in each Pergunnah paying a separate Jumma.	Area.												
			Area in			Area in Local Beegahs of 3,025 square yards.			Area in	Area of cultivation and culturable land in			Area of uncultivable land or hill and jungle in			Amo gahs py
			Acres.	R.	P.	Beegahs.	C.	B.	Square Miles.	Acres.	R.	P.	Acres.	R.	P.	Bee
1	Behar,	386	135718	3	23	217149	0	0	212·06	135718	3	23	.....	...	...	
2	Bhillawur,	493	88234	2	05	141174	0	0	137·86	81834	2	05	6400	0	0	
3	Bilonjeh,	333	301146	3	28	481833	0	0	470·54	99500	3	28	201646	0	0	...
4	Chirkanwan,	271	142423	3	04	227877	0	0	222·54	110423	3	04	32000	0	0	
5	Dadur,	55	17,663	0	07	28261	0	0	27·59	17663	0	07	.....	...	...	
6	Dukhnair,	48	15790	1	28	25264	0	0	24·52	15790	1	28	.....	...	...	
7	Ekil,	423	97935	0	03	156696	0	0	153·02	97935	0	03	.....	...	...	
8	Gya,	5	2519	3	11	4030	0	0	3·93	2519	3	11	.....	...	...	
9	Goh,	102	43163	0	18	69061	0	0	67·44	43163	0	18	.....	...	...	
10	Jurrah,	186	98437	0	0	157499	0	0	153·80	49219	0	0	49218	0	0	
11	Jupla,	282	116730	2	31	186768	0	0	182·39	77950	2	31	38780	0	0	...
12	Kabur,	134	65208	0	34	104333	0	0	101·80	65208	0	34	.....	...	...	
13	Kootoombeh,	593	196301	3	26	314081	0	0	306·72	196301	3	26	.....	...	...	
14	Muheir,	661	321964	2	33	515142	0	0	503·06	193964	2	33	128000	0	0	
15	Munora,	107	46168	2	35	73868	0	0	72·14	46168	2	35	.....	...	...	
16	Nurhut,	418	183788	0	07	294061	0	0	287·16	175788	0	07	8000	0	0	
17	Okree,	Included in Bhillawur,	67405	2	36	107848	0	0	105·32	67405	2	36	.....	...	...	
18	Puchrookhee,	227	94848	0	33	151756	0	0	148·20	62848	0	33	32000	0	0	
19	Puhra,	198	87432	2	16	139891	0	0	136·61	87432	2	16	.....	...	...	
20	Roh,	151	130075	2	33	208120	0	0	203·24	97233	2	33	32842	0	0	
21	Rajgeer,	33	23716	0	0	37945	0	0	37·06	23716	0	0	.....	...	...	
22	Sumaee,	373	170515	3	12	272825	0	0	266·43	170515	3	12	.....	...	...	
23	Sunout,	531	211185	2	15	337896	0	0	329·97	204785	2	15	6400	0	0	
24	Sherghotty,	1305	474399	2	03	759038	0	0	741·25	234399	2	03	240000	0	0	
25	Siris,	641	240858	0	36	385372	0	0	376·34	227418	0	36	13440	0	0	
26	Utree,	54	29565	2	23	47304	0	0	46·19	29565	2	23	.....	...	...	...
27	Urwul,	386	185399	1	38	296638	0	0	289·68	185399	1	38	.....	...	...	
28	Uncha,	100	52429	1	03	83886	0	0	81·92	52429	1	03	.....	...	...	
		8496	3641026	2	21	5825616 Fractions,.. 25 5825641	0	0	5688·78	2852300	2	21	788726	0	0	

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NOTES

ON

THE DISTRICT OF BEHAR.

PERGUNNAH BEHAR.

THIS Pergunnah is situated at the North-East corner of the Zillah, touching upon Zillah Patna to the North, and Zillah Monghyr to the East. Its surface which is a dead level (with the exception of a small hornstone and jasper hill one mile North-West from its capital Town Behar) and beautifully diversified with mango plantations, is highly cultivated, producing wheat, rice, and poppy in great abundance, besides all sorts of vetches, maize, bajra, also small quantities of gram, safflower, arhur dal, &c.—The principal harvests embrace the following crops. The Rubbee crop is cut in April, and consists of wheat, barley, dal, gram, peas, linseed, and safflower. The Bhadooee crop, from its name, is reaped in August and September, and consists principally of broad cast rice, Indian-corn, and murooa. The Khureef is reaped in the cold weather, or in December and January, and consists of transplanted rice and bajra. As this succession of crops obtains in all Pergunnahs repetition will be useless.

The land is universally irrigated from pynes, ahurs, and wells, whole rivers being used up for this purpose. The Sukree and Punchaneh rivers, flowing from the Southern hills of Zillah Ramgurh, convey a large body of water into the Pergunnah, and are almost entirely absorbed by the numerous watercourses which are fed by them: this is particularly observable in the Sukree Nullah, a violent and impetuous stream during the rains, and several hundred feet in width, where it enters the Pergunnah, but having traversed the Pergunnah from South to North leaves it a puny and feeble watercourse, in fact, a mere ditch.

Behar, the capital Town, with a probable population of 20,000 inhabitants, and once a large city, is now fast verging upon ruin; its massive stone Fort is no longer tenable, its tombs and mosques are in a sad state of decay, and its whole appearance has the air of a city deserted by all its influential and rich members.

The manufacture of saltpetre, on a small scale, is carried on in the Town, the earth for its manufacture being collected in its streets and alleys. Printed cottons are manufactured by a few families; also brass and copper pots, lac bracelets, and a few other articles of minor commerce.

The Thannah or Police Stations are—Behar, Kumoordeengunje and Allumgunje. Subordinate Police Chokees are at the villages of Bhudye and Manpoor.

There is an opium godown at Behar for the reception of the drug previous to its being despatched to Patna.

	Acres.	
Area of Pergunnah, ...	135,718	Square Miles 212.06.
Local beegahs of 3025 S. Y.,	217,149	

Soil. Principally Domut or Kewal; a soil composed of clay, decayed vegetable matter, and iron oxide, and is considered the best soil in the Zillah. The land of this Pergunnah, with the exception of the small proportion of ground necessarily occupied by the sites of villages, roads, pynes, small tanks, and nullahs, may be said to be entirely cultivated.

Roads. A good road traverses the Pergunnah from South to North, or from Gya to Patna, but from the high state of cultivation of the Eastern portion of Behar in general, roads are but transient marks in the features of the country, as they are generally ploughed up once a year, and re-appear according to the fancy or convenience of the traffickers to and from the different villages.

PERGUNNAH SUMAIEE.

This Pergunnah, situate to the South of Pergunnah Behar, and which it closely resembles in crops and soils, is, with a trifling exception, a dead level country, highly cultivated, most diligently irrigated, and elegantly diversified by mango plantations which are seen in every direction. The exceptions to the level of the surface consist in a small hornstone hill of a couple of miles in length, in the village of Budokhur, and a small portion of the Eastern shoulder of the Rajgheer range of hornstone hills which abut upon the Western boundary, and penetrate it for three miles. Its capital is Sumaiee, a substantial village, besides which may be mentioned Newadeh, Kadirgunje, Mohunidabad, Chundeemow, and Pukree, all fine and populous villages, none of which are noted for any manufactures, but are all, as indeed are all the villages of Eastern Behar, large exporters of grain towards the Ganges, which grain, for want of roads suited to wheeled conveyances, is all carried upon the backs of pad bullocks.

There is a Thannah at Newadeh.

Markets are held at the villages of (names not given.)

	Acres.	
Area of this Pergunnah, ...	170,515	Square Miles 266.43.
Local beegahs, ...	272,825	

Soil is principally Kewal or Domut.

Roads. A good road leading from the Southern Ramgurh hills towards Behar, traverses the Pergunnah from South to North. Several village roads, of a very questionable construction and goodness, lead from Newadeh towards Soorujgurrah in Zillah Monghyr.

Nullahs. The Sukree Nuddee traverses the Pergunnah from South to North, its water being much used for the purposes of irrigation. The Punchaneh traverses the Western corner of the Pergunnah, and its waters are also used for the same purposes. During the hot weather the beds of these streams present broad beds of burning sand, but water may always be obtained by digging down a couple of feet. During the rainy season these dry beds become impetuous torrents.

Hot Wells. To the North-West of the Pergunnah, at a village named Mudhoobun, is a hot well situated at the foot of the Rajgheer hills, at which spot a yearly fair is held in the month of Kartik, to which, at this season of the year, great crowds of people flock from the neighbouring Pergunnahs.

PERGUNNAH PUCHROOKHEE,

SITUATE to the South of Pergunnahs Sumaiee and Roh, is bounded to the South by the Vindhyan hills and Zillah Ramgurh. About one-third of its area or 32,000 acres or 50 square miles of its entire area is occupied by hill and jungle, the latter in parts almost impenetrable and consisting chiefly of the mimosa catechu bamboo, dhak or "butea frondosa," Ebony, Sall or Saloogunje trees, all of which are used more or less. The catechu is manufactured on the spot, the bamboos, ebony, and other timber and stakes are cut and taken to the Northward. The hills are granite, gneiss, and quartz. In the latter is found extensive beds of talc which are extensively quarried and the produce exported. The principal mines are immediately on the Ramgurh boundary, in the hulka of Jheirkee, to the East of the Pergunnah.

The Northern portion of this Pergunnah is highly cultivated and very thickly inhabited. The principal crops are rice, wheat, arhur dal, a little sugar-cane, poppy, vetches, and safflower. The Northern portion is irrigated with great care, especially on the banks of the Sukree Nuddee which traverses the North-Eastern portion of the Pergunnah, and leaves the Pergunnah through an opening in a range of low quartz hills which separates the Pergunnah from Pergunnah Roh. Its capital is Akberpoor, Puchrookhee, two detached but nearly contiguous villages on the banks of the Koree Nullah.

There is a Police Chokee at Gobindpoor.

Area in acres 94,848, beegahs 151,756, square miles 148.20.

Soil. To the South the soil is nearly ruined by its free admixture with quartz, mica, and sand from the hills, and in this soil is grown maize and juwahir. To the North the soil is good but not so rich as that of Behar and Sumaiee; it is drier and harsher to the South. The muhooa tree, "bassia latifolia," is plentiful. This tree is seldom seen in good soil, nor far from the hills, its produce or petal so extensively imported from the Ramgurh hills, as well as collected in the Behar jungles, proves a highly profitable article to the zemindars. The petal is sold to the different Kulwars or distillers, who extract a powerful spirit from it—it is also dried and eaten. The jungles to the South afford good pasturage to large droves of buffalos, which partly supply the ghee consumed in Behar and Sumaiee.

Road. A good road, leading from Hazareebagh and Ramgurh, traverses the Pergunnah from South-West to North-East.

PERGUNNAH ROH.

THIS Pergunnah, lying to the South of Sumaiee and North of Roh, embraces within its circuit a large body of hill and jungle, occupying about 32,842 acres; the remainder, or 98,527 acres, is occupied generally with rice cultivation, a little wheat, and an abundance of poppy.

The vicinity to the hills, and the absence of all nullahs to carry away the rain, enable the zemindars to collect large bodies of waters in reservoirs or khuzanehs, which water is extensively used for the purposes of irrigation.

This Pergunnah is but slightly wooded, and has the appearance of having been, at no very distant period, a part of the wilderness, at present reduced to a narrow strip of jungle at the foot of the hills.

In the hulka or mehal of Kowa Khoh there still remains a large quantity of jungle used as grazing ground by the gwalahs for herds of buffalos, by the wood, grass, and bamboo cutters and by the shikarees for game. The hills are granite and quartz with masses of chlorite and hornblende, mica and tourmaline.

The capital is Roh, a good substantial and clean village, one mile South of which, at the village of Mudura or Murera, is an establishment of Gooshains, hospitable to a degree. Their establishment consists of several muths surrounded by a puckha wall and garden, a fine tank, with a dhurmsala for travellers, and several ranges of dwelling-houses for the mohunts and chelahs.

Area in acres 130,075, beegahs 208,120, square miles 203.24.

Soil. Kewal principally, good and productive and highly cultivated. The small strip of jungle at the foot of the hills in 1842 was nearly a mile deep; in 1847 it had been cleared to within a hundred yards of the foot of the hills, and wherever planted has proved most productive.

Roads. None except a few that are ploughed up yearly. A footpath leads through a gap in the hills of Rajpoora to the valley of the Sukree Nuddee, and high road from Gya to Deugurh or Byjnath in Zillah Beerbhoom, a road much frequented by pilgrims.

PERGUNNAH NURHUT.

This is an extensive Pergunnah, divided into two unequal portions by Pergunnah Utree, which traverses it in a North-Easterly direction. Both portions are highly cultivated, with the exception of narrow strips of jungle running along the foot of the two ridges of hills by which it is separated on both sides from Pergunnah Utree, which lies in a valley 2½ miles broad, formed by these two ranges of hills, known as the Rajgheer range.

Pergunnah Nurhut is densely populated and richly cultivated, producing rice and poppy in great abundance, wheat, dal, muroon, rye, vetches of all kinds, juwahir, and maize, which are irrigated with great care, water being led out from the Punchanch and Dhadur Nullahs. The soil in the immediate vicinity of the hills is harsh, dry, and stony, but in the open plains it is of a good quality, but not of so good a quality as that of Behar or Sumaiee. The capital is Nurhut, a small village.

Police Chokee at Girceuk; and at Huswah, a Jemadar and two Burkundazes; and at Kinar Chuttee, a Naib Darogha and two Burkundazes.

Area in acres 183,788, beegahs 294,061, square miles 287.16.

Soil. Near the hills, stony, further removed Pouroo, Dorus, which is composed of loam, a little sand, oxide of iron, and is used for wheat; in the plains further removed from the hills, Kewal or rice grounds. About 8,000 acres of this Pergunnah are occupied by hills and stony unculturable ground, the latter is only in the immediate vicinity of the hills.

Road. A good road, leading from Gya to Behar, traverses the Pergunnah from West to East.

Nullahs. The Punchaneh, Dhadur, and Tilya Nullahs flow from South to North, through the Pergunnah.

The hills are entirely hornstone and jasper and would make excellent building stone from its even and extensive fracture.

PERGUNNAH UTREE.

THIS Pergunnah is a narrow valley in the heart of Pergunnah Nurhut, of 2½ miles in width and 16½ long, the central part of which is well cultivated, the rest is overrun with brambles and jungle.

Area in acres 29,565, beegahs 47,304, square miles 46.19.

Soil, where cultivated, is good, and is used for rice; nearer the hills it is stony and harsh.

Roads. A footpath traverses the Pergunnah, and several penetrate through and over the hills.

Nullah. A small mountain torrent flows through the valley.

Jungle. The jungle to the East is a preserve for game.

PERGUNNAH SUNOUT.

PERGUNNAH SUNOUT is generally well cultivated, though by no means so highly as either Pergunnah Behar or Sumaiee. Its soil is of a drier nature and the ground more elevated; it nevertheless produces large crops of rice, wheat, rye, poppy, smaller crops of ahur, junera, safflower, til, murooa, vetches, indeed all the crops common to Behar. The mango plantations to the Westward of this Pergunnah are very extensive, especially on the banks of the Moorhur Nuddee, which traverses the Pergunnah from South to North and divides itself into several broad branches. The plantations are here seen extending for many miles along the branches of this nullah, of a luxuriant growth and of great beauty, but perhaps detrimentally occupying much good ground that might be more beneficially employed for the growth of corn and rice. The Phalgoon river also traverses the Pergunnah from South to North. Its water is extensively used for the purposes of irrigation, which is led out with great care and labor. To the North is the cluster of barren granite Burrabur hills occupying about 6,400 acres. In these hills are to be seen remains of old buildings, granite columns, and images, as also caves excavated in the solid granite rocks, but by whom constructed or for what purpose, all trace has long been lost sight of. The Pergunnah boasts of several large and substantial villages such as Tikaree, Sunout, Chukund Bela, Bhowree, and Nylee. The first of these is a Town of goodly appearance, with a neat bazaar; a square mud Fort in perfect order, surrounded by a wet ditch, the joint property of Modh Narain and Heth Narain, sons of the late Muharajah Mitrajeet Singh. The interior of the Fort contains a series of private apartments, garden houses, gardens, fountains, tanks, deer preserves, and temples.

Police Chokees at Tikaree, Booniadgunge, Punchainpoor, Bela, Ayma.

Area in acres 211,185, beegahs 337,896, square miles 329.97.

Soil is composed of Pouroo, Dorus, and not much Kewal. Along the banks of the Phalgoon Balsoondri is a sandy soil, mostly driven up from that river by the hot West

winds. The whole Pergunnah, with the exception of the ground occupied by the Burrabur hills and a few hillocks to the Eastward, may be said to be wholly cultivated and thickly inhabited.

Roads. A good high road, connecting Patna with Gya, traverses the Pergunnah from South to North. There is a Dâk Bungalow at Bela, 13 miles North from Gya.

Nullahs. The Phalgoon, Jumna, and Moorhur flow to the North through the Pergunnah. From a hillock to the East of the Pergunnah, a good chlorite is quarried and used at Gya for the manufacture of images, pestles, &c.; also at the village of Jurha a handsomely crystallized hornblende is quarried for building purposes.

PERGUNNAH ÉKIL.

This Pergunnah, bordering on Zillah Patna, is highly cultivated and densely populated. The soil is very good Kewal, producing rice, wheat, and poppy in abundance, besides all the other usual crops of the Bhadooee and Fussullee. The surface of the country is a dead level, well wooded with mango plantations and palm trees, and carefully irrigated from the waters of the Moorhur, Durdha, and Poonpoon Nullahs, which traverse the Pergunnah from South to North.

Police Chokees at Subluk, Surai, Sandeh.

Area in acres 97,935, beegahs 156,696, square miles 153.02.

Soil. Kewal, highly cultivated and irrigated.

Roads. A very indifferent road traverses the Pergunnah leading to Patna, and a small portion of the Patna and Gya high road traverses the Eastern corner of the Pergunnah.

Nullahs. Moorhur, Durdha, Poonpoon. The latter has water in its bed all the year round, but is not navigable for any thing beyond a canoe.

PERGUNNAH MUHAIR.

Although the second largest Pergunnah in Behar, it is by no means so productive as many of a far inferior size, as about 128,000 acres or 200 square miles to the Southward are occupied by hills, jungle and ravines, constituting the Northern face of a portion of the Vindhyan mountains. To the North about 23,040 acres are also covered with the Western shoulder of the Rajgheer hills, and with broken unprofitable ground, leaving 170,904 acres of cultivated and culturable ground. To the East, West and centre, the Pergunnah is well cultivated and possesses a good Kewal soil, with a sprinkling of Pouroo or drier soil when nearing the hills. The principal crops are rice, wheat, poppy, arhur dal, murooa, which are diligently irrigated. Near the hills and jungle, junera and Indian corn are extensively cultivated and are not irrigated. The Southern jungles produce timber, tusser, silk, kuth or catechu, firewood and bamboos. The hills afford good granite which has lately been used for building bridges on the Great Trunk Road, which passes through the South-West corner of the Pergunnah. To the East, bordering on Pergunnah Jurrah, a quantity of talc is quarried and exported to the Patna market. The jungles abound with tigers, which are very troublesome, leopards, pigs, stags, bears, peafowl, jungly fowl; and likewise afford good pasturage to large herds of buffalos. The

Dhurda, Phalgoon and Mohuneh Nullahs traverse the Pergunnah from South to North, the two latter unite in the Pergunnah four miles South of the station of Gya, past which place their united waters flow under the name of the Phalgoon river. A lofty granite hill, standing four miles from the Northern boundary, measuring 9 miles round its base, gives its name to the Pergunnah. In this hill the boa-constrictor is found. Six miles South of Gya, (which city is immediately on the North-Western boundary of the Pergunnah) and situated on the Western banks of the Mohuneh, is a Sunnyassie monastery or establishment, governed by a mohunt. The establishment possesses several villages, the produce of which is applied to charitable purposes, as poor travellers may claim and do obtain at the gates of the monastery, a liberal supply of rice, dal, salt, firewood and a place to cook this food in. This daily allowance is continued for three successive days, at the expiration of which time, the traveller is supposed to have recovered from his fatigues and is expected to continue his journey. The buildings used as granaries, necessary to store the rice and dal for this continual drain upon the establishment, are rather extensive. A few hundred yards from the monastery stands a lofty temple, supposed to be of Budhist origin. This temple, which is fast falling to decay, stands in the midst of an extensive range of subterranean ruins, from which have been lately exhumed granite columns of an ancient date, images, both brazen and of wax, some with inscriptions, carved arabesques, bricks of a very large size, together with several other materials, which have evidently belonged to an extensive range of temples or buildings long since demolished and forgotten, and which have now a stratum of soil from ten to twelve feet thick overlaying them. Surrounding these ruins, an embankment as of a Fort can be traced several hundred yards square.

Towns, Booniadgunje. Immediately opposite to Gya is a large town inhabited by weavers. The capital Muhair, is a small village.

Police Chokees at Bulwa Chuttee, Sulempoor, Kooslah, Bodh, Gya.

Area in acres 321,964, beegahs 515,142, square miles 503.06.

Soil. Principally Kewal and Pouroo; half of the Pergunnah well cultivated and irrigated, half occupied by jungles and hills.

Roads. A good road, passing through Bodh Gya from Gya, leads to the Benares high road. Several minor roads traverse the Pergunnah, but they are tortuous and generally bad.

Nullahs. Dhurda, Mohuneh, Phalgoon. Down the two latter, wood, bamboos, and rafters are floated to Gya during the rainy season. When large bodies of water pour down from the hills with an overpowering velocity, the rafts are tost into the streams on the edge of the jungles and allowed to make the best of their way to Gya, where they are caught by people on the look-out for them, when the streams are less boisterous, they are guided by one or two woodmen. During these freshes all communication is cut off from the opposite banks of these streams.

During the rainy season great quantities of large fish travel up from the Ganges, although upwards of a hundred miles distant, and are speared and caught with nets at Gya. On the water subsiding, which it does at least once a week, immense numbers of fish are caught. For eight months in the year, the bed of the Phalgoon presents a broad surface of burning sand without a drop of water, beyond what is collected in a small cunette or ditch excavated opposite to the City of Gya.

PERGUNNAH JURRAH.

About one-half or 49,218 acres of this Pergunnah is covered with hill and jungle, similar to, and adjoining that of Pergunnah Puchrookhee; the Northern half is well cultivated and inhabited, principally producing wheat, rice, junera, and Indian corn; the muhooa tree is common and abundant. From the Southern hills a large quantity of talc is quarried and exported to the Patna market; in the Pergunnah it is pounded and used for ornamenting the exterior of houses, pottery and toys, which imparts to the articles, so smeared, a lively, glistering appearance.

The cultivated portion of the Pergunnah is well irrigated and the soil good, except near the hills where it is drier and less productive.

Police Chokee, Rujoulee.

Area in acres 98,437, beegahs 157,499, square miles 153.80.

Soil. To the North, Kewal and Pouroo; to the South. Pouroo and Balsoondree;—half the Pergunnah cultivated, one-half hill and jungle.

Road. A good road traverses the South-Western portion of the Pergunnah. It enters the Pergunnah from the South by the Goburdha Ghat, and after rising and falling over quartz and mica hills for six miles, descends to the valley of the Goburdha Nuddee amidst scenery of great beauty.

In these hills talc mines are extensively quarried, of which mention will be made in the geological part of these notes.

Nullahs. The Goburdha and a few other hill torrents penetrate into this Pergunnah from the hills; the sand in the bed of the Goburdha is, at Singhur, discoloured from innumerable garnets, washed down from the Southern hills, which may be gathered in bushels, but from their minute proportions are totally valueless.

Chief villages, Umawan, Therdillah and Rujoulee, all substantial villages; the latter is a mart for the produce of Southern jungles, viz., timber, bamboos, catechu, talc, grass, gums, and barks.

Nullahs. The Tilya and Dunarjeh flow through the Pergunnah from South to North.

PERGUNNAHS URWUL, UNCHA, GOH, DADUR, KABUR.

These five Pergunnahs possess, in common, a poor sandy soil, are badly cultivated, and much overrun with a coarse grass, jujube, and plas or dhak, or butea frondosa bushes.

Pergunnahs Urwul and Uncha are bounded on the West by the broad river Sone, which, in the hot season, presents a bed of sand two miles in breadth and a few hundred yards of water only. These two Pergunnahs have had a belt of land of about one mile or a mile and a half completely buried underneath the sand of this river, which is drifted up during the prevalence of the dry Westerly winds. Much of the ground, at present occupied by dhak jungle and jujube bushes, would, if cleared, produce good crops of wheat, junera, gram, and all the drier crops.

The population of these Pergunnahs is far less numerous than that of the Eastern Pergunnahs which are less wooded, less cultivated, have a worse soil, and have a wild rugged appearance; after leaving the highly cultivated lands of Okree Bhillowur, Ekil, and others, the want of water and the sandy soil proving the great obstacles to improvement. The surface of these Pergunnahs is perfectly level. Poppy is extensively grown in Pergunnahs Urwul, Uncha and Kabur.

In Pergunnah Urwul, a belt of low jungle extends from the Southern boundary six miles into the Pergunnah, in which wild cattle are found, the probable produce of strayed village cattle,—they are very shy and difficult to approach.

The principal towns in Urwul are: Shumshernuggur, Kyal, Kipree, Kojhasa and Urwul. In Pergunnah Incha or Uncha, Uncha and Daoodnuggur. At the latter town are manufactured paper of a good quality, carpets and suttrinjees. All three manufactures are extensively exported to Patna, Dinapoor, Ghazeepoor, Benares, and to other cities. The manufacture of these articles is principally carried on by the Mahomedans, who use many arts to entrap unwary purchasers by inserting a scanty amount of pile in rugs and carpets that are bought by the square yard, and by adding a plentiful supply of water previous to weighing the suttrinjees, that are sold by weight. I have known a large suttrinjee offered for sale lose forty pounds' weight after being dried in the sun for a few hours.

In Pergunnah Goh, Goh and Unwaree.

In Pergunnah Dadur, Dadur.

In Pergunnah Kabur, Muduwar or Kabur and Koonch or Kooch. In this Pergunnah are the ruins of several buildings attributed to the Koles, a temple at Koonch, the remains of a large Fort to the North of the Pergunnah, several tanks, besides heaps of brick, columns, images, lying about in many directions—all bespeak former energy and antiquity.

Thannahs in Pergunnah Urwul, Wasilpoor, Kootul.

Thannahs in Pergunnah Uncha, Ahmedgunje.

Police Chokees in Pergunnah Urwul, Tootoorookhee, Shumshernuggur, Oopuhrah, Puhlejah, Kurpee, Alowulpoor.

Police Chokees in Pergunnah Uncha, Deor, Kuspoorah, Seeharee, Koonch.

Area in acres, Pergunnah Urwul, 185,399, beegahs 456,638, square miles 289.68.

Ditto, ditto Uncha, 52,429, beegahs 83,886, square miles 81.92.

Ditto, ditto Goh, 43,163, beegahs 69,061, square miles 67.44.

Ditto, ditto Dadur, 17,663, beegahs 28,261, square miles 27.59.

Ditto, ditto Kabur, 65,208, beegahs 104,333, square miles 101.80.

Soil, principally a poor sandy Balsoondree; in spots Kewal, sparingly cultivated with wheat, rice, dal.

Roads. A road from the Benares Trunk Road, leading to Dinapoor and passing along the banks of the Sone river, traverses Pergunnahs Urwul and Uncha.

Nullahs. The Poonpoon, with steep banks and muddy bottom, flows along the boundary of Uncha from the South towards the North, separating that Pergunnah from Goh, enters Urwul on its Southern boundary, and, after a very tortuous passage, leaves it on the Northern boundary.

PERGUNNAHS OKREE AND BHILLAWUR.

The lands of these two Pergunnahs are so intimately mixed together, that a description of one answers for the other. These two Pergunnahs are situated on the Northern boundary of Behar touching Zillah Patna, their surface is a dead level, highly cultivated, well irrigated and beautifully wooded, with the exception of about 6,400 acres, occupied by the Northern face of the Burrabur hills. On the Southern boundary, the entire Pergunnah may be said to be cultivated or culturable, the produce being rice, wheat, poppy, castor-oil, murooa, ahur, safflower, gram, vetches in general, rye and barley. Irrigation is much attended

to, for which purpose the waters of the Phalgoon, Dhurda, Soond, Julwara and Jumna Nullahs are used. The soil is a rich Kewal, generally with a little Pouroo towards the Northern parts of the Pergunnahs. The capitals Okree and Bhillawur are two insignificant hamlets, the large towns are Jehanabad with a Dâk Bungalow, Lukhawur, Mosumpoor, Bhartoo, Wyna, Kakoo and Dhurawut. At the two latter villages are large bodies of water or tanks, that of the former of an irregular shape, measuring about a mile in extreme length when well filled; the latter is an oblong of several hundred yards in length and is situated immediately under the Burrabur hills, it is said to have been the work of a Rajah whose name has long since ceased to be remembered; it is fed from the Burrabur hills, which during the rainy season pour down a large body of water into its basin, which is used for the purposes of irrigation. During the cold season large flocks of wild geese and other aquatic birds resort to these pieces of water. In Zillah Behar, where all the crops are brought to perfection by the aid of artificial irrigation, no greater benefit can be bestowed upon a village than the formation of these tanks or reservoirs, for in case of a partial or total failure of the periodical rains, a sure supply from the former year's rain is always available; and were these lakes or tanks of more frequent occurrence, much distress would be averted and many lives saved in the years of drought and distress, which periodically visit these provinces.

Thannah, Jehanabad.

Police Chokees, Mukhdoompoor, Bumdhoogunje, Bishoongunje, Kazee Serai.

Bhillawur, area in acres 88,234, beegahs 141,174, square miles 137.86.

Okree, area in acres 67,405, beegahs 107,848, square miles 105.32.

Soil. Kewal and Pouroo, highly cultivated and irrigated.

Road. The Patna and Gya road passes through the Pergunnah from South to North, a fair road from the Burrabur hills to Kakoo.

Nullahs. Phalgoon, Dhurda, Julwura, Soond and Jumna.

PERGUNNAH GYA

Is a small Pergunnah containing the Hindoo City of Gya, the Mussulman Town of Sahibgunje, and the Civil Station of Gya, and comprises five villages only, whose almost entire lands are occupied by buildings. A small quantity of good rice and poppy are grown to the Westward of the Pergunnah.

Area in acres 2,519, local beegahs 4,030, square miles 3.93.

Nullah. This Pergunnah is situated on the banks of the Phalgoon Nuddee, which supplies Gya with wood, bamboos, grass and other products of the Southern jungles, which are floated down during the rainy season.

Thannahs, Gya, Sahibgunje.

Chokee, Gya.

PERGUNNAHS DUKNEIR AND PUHRA

Are two badly cultivated Pergunnahs, the soil being harsh and dry, though these are spots of great fertility, especially to the North, producing rice, poppy, wheat, dal and other vetches. A large area in the Pergunnah is overrun with low jungle bushes and

coarse grass. The surface of these two Pergunnahs is a dead level, with the exception of a few scattered granite hillocks and the short range of hills to the South of Gya.

A Police Chokee is in the village of Bhoroundha.

Area in acres, Pergunnah Duknoir, 15,790, beegahs 25,264, square miles 24.52.

Ditto, ditto Puhra, 87,432, beegahs 139,891, square miles 136.61.

Soil. To the South, Balsoondree and a stony harsh soil; to the North, Kewal and Pouroo.

Road. A good road, from Gya to Sherghotty, passes through Puhra, from North-East to South-West.

Nullahs. The Moorhur flows through both these Pergunnahs from South to North, and the Jumna traverses Puhra to the Eastward, the Phalgoon bounds Pergunnah Puhra to the East. The water from the Nullahs is much used for the purposes of irrigation.

PERGUNNAHS SIRIS AND MUNORA.

THESE two Pergunnahs are highly cultivated and densely populated, possessing a fine rich soil, level country, and an abundance of water, producing large and valuable crops of wheat, sugar-cane, barley and rye, a limited crop of poppy, an abundance of vetches, and all the minor crops common to Behar. The surface of the Pergunnahs is a perfect level, with the exception of a few scattered granite hillocks, is not studded as most Pergunnahs are with mango plantations, but presents a fine open country. On the Western boundary of Siris, a tract of land of about one mile in width, bordering on the Sone river, and containing 13,440 acres, has been covered with sand drifted up from the bed of the Sone. This land although ruined for the growth of rice and wheat, is much used for the cultivation of castor-oil plants which thrive well in a sandy soil. Artificial irrigation is much attended to, rain water being collected in khuzanchs or reservoirs during the rainy season.

The capital Town of Pergunnah Siris is Siris, a handsome village near the Benares high road, buried in the shade of a grove of "siris mimosa" trees.

Large Towns are, Nourungabad or Aurungabad, Jumour and Powye.

Thannah, Nourungabad.

Chokees, Barroon, Jumourgunje, Obra, Namnuggur.

Area in acres, Pergunnah Siris, 240,858, square miles 376.34.

Ditto, ditto Mumora, 46,168, square miles 72.14.

Soil. Kewal and Pouroo, both of a good description and highly cultivated.

Road. The Calcutta Trunk Road traverses Siris from South-East to North-West. Dâk Bungalows are at Nourungabad and Barroon, the latter on the banks of the Sone.

Rivers and Nullahs. The Sone river bounds Siris to the West where its sandy bed is nearly three miles in width, with a very insignificant stream of a few hundred yards in breadth, on which stream boats, for the purposes of ferrying over horses, cattle, and heavy baggage, are always in attendance, but the river is sometimes fordable in the cold weather. A Dâk Bungalow is situated on the opposite bank at Dehree in Zillah Arrah. The Butanee and Poonpoon Nullahs flow from South to North through both these Pergunnahs, the Poonpoon retaining water in its bed all the year round, and presents the anomalous appearance of a stream with steep banks and a muddy bottom, whilst all the other streams in Behar have broad sandy beds, depressed a few feet only below the surface of the country through which they pass, the peculiarity of this stream is, that it takes its rise from the same hills, flows in the same direction, and through the same soil, as its neighbouring streams which have the usual sandy beds and low banks.

PERGUNNAII CHIRKANWAN.

THIRTY-TWO THOUSAND acres of this Pergunnah are occupied by hill and jungle, the rest is highly cultivated and well populated, possesses an excellent Kewal and Pouroo soil, producing abundant crops of wheat, rice, barley, rye, sugar-cane, dal, vetches and a limited supply of poppy, all of which are diligently irrigated from reservoirs. The soil round about the hills is of a dry, harsh nature, used for the cultivation of junera and arhur dal, which is not irrigated.

Chokees, Muddunpoor, Ruffeegunje.

Area in acres 142,423, beegahs 227,877, square miles 222.54.

Soil. Kewal and Pouroo, highly cultivated and irrigated.

Road. The Calcutta Trunk Road traverses the Pergunnah from East to West. A Dâk Bungalow is at Mudunpoor, 14 miles West of Sherghotty.

PERGUNNAII SHERGHOTTY.

THIS extensive Pergunnah, measuring fifty miles from East to West, and twenty-five in breadth, has rather more than one-half of its whole area occupied by hills and jungle. A Northern spur of the Vindhyan mountains penetrates the Western boundary, and extends into the Pergunnah in an Easterly direction for twenty-four miles. The spur, which is about five miles in general width, is covered with a dense jungle; with a fair proportion of good timber trees, such as saloogunje, ebony, simul, sal, sukooa, kuru and asun and a great many other trees mentioned at the end of these notes. These forests supply an inexhaustible supply of the coarser woods used for building, manufacture of ploughs and yokes, besides a plentiful supply of bamboos, grass, a variety of gums, resins, and medicinal herbs, barks, roots, leaves and fruits, which are duly collected, used in the Zillah or exported. The wild silk or tusser is also gathered from the asun trees. At the proper season the eggs having been hatched, the larvæ are taken out in the jungles and placed upon healthy trees, where they live and flourish and eventually spin their cocoons, when they are gathered from the trees and taken home in baskets. The silk is wound off by women and children, and most of the chrysalis destroyed, their shell forming an article of commerce, principally used for binding matchlock barrels to their stocks;—cut into the finest shred, a man can scarcely break it. The silk is exported to Gya, Patna and Dinapoor. A certain number of cocoons with their chrysalis are preserved, to afford a new crop of eggs for the ensuing year, great care and trouble being expended to insure a good crop by a proper distribution of the moths for the due impregnation of the females.

The Northern portion of the Pergunnah is well cultivated and irrigated, producing fine healthy and abundant crops of wheat, rice, poppy, barley, rye, ahur and vetches of all kinds. To the South and West lies an extensive valley five miles in general width, and twenty miles in length, well cultivated in the centre, but much covered with jungle near the hills. The valley is watered by the Moorhur Nullah which flows through its whole length and affords an easy mode of irrigation. Around Kothee, on the borders of the Palamow forest, thirty villages have been reclaimed from the forest since 1790, the year of the settlement made by Messrs. Thomas Law and Barlow. Towards Deoree, the jungle is gradually disappearing, retreating as the population increases; fearful havock amongst which was made by the dreadful famine of 1770 A. D., the effects of which are not yet obliterated. During this dreadful period, the rain had partially failed for three previous years,

cattle died and the inhabitants commenced to die also; but in 1770, the rain failing entirely, one-third of the inhabitants, in Behar alone, died of famine, men eating men, and mothers their children. Such a large amount of the entire population being thus swept away, the jungle encroached upon many hitherto fertile tracts, which is now only, at this day, at the distant period of eighty-four years, being again cleared and cultivated. Since the famine, 45 villages, at the foot of the Dunghy Pass, have been reclaimed and re-populated. Round about Chirkee and Sherghotty, 225 villages; near Kothee, 30 villages; near Deoree only a few, the soil being rather dry from its greater elevation, but these evidences of an increasing population are but as a drop in the ocean of population required to again people and cultivate the whole of the valuable and formerly cultivated lands in this Pergunnah, now overrun with jungle and forest.

The capital Town is Sherghotty, situated on an island formed by two branches of the Moorhur river. Its population is chiefly composed of Mahomedans, whose tombs, durgahs and mosques bespeak a former period of greater richness and prosperity than it can now boast of. The Town, although a mile in length, is, from being so completely buried in a forest of palm trees, invisible from the Grand Trunk Road, which however passes close to it. To the South of the Town is an old mud Fort, surrounded by a ditch, built in 1764 by Soondursa Qajah of Tikaree.

Thannah, Sherghotty.

Chokees, Bara, Chuttee, Salgunje, Surawa, Dhungye, Amos, Emamgunje, Goowahr.

Area in acres 474,399, beegahs 759,038, square miles 741.25, of which about 240,000 acres are occupied by hill and jungle, 234,399 culturable.

Soil, generally Kewal and Pouroo; near the hills of a dry, harsh and stony nature. Almost all the plain land covered with jungle is good Kewal soil and culturable.

Roads. The Calcutta Trunk Road traverses the Pergunnah from South-East to North-West, with Dâk Bungalows at Bara and Sherghotty. To the South, a good road leads from Sherghotty to Chittra, formerly a Civil station, where Civil Servants remained during six months of the year, Sherghotty being occupied during the unhealthy or rainy season. This arrangement was necessary on account of the insalubrious nature of the Chittra jungles. In 1834, both Sherghotty and Chittra were abandoned as stations, and Gya established; another road leading up the valley of Emamgunje to Palamow and Ranchee. A high road leads to Gya from Sherghotty, and the old Calcutta road, tortuous and water-worn, leads from Sherghotty to the Dhungye Pass.

Nullahs. The Moorhur, Lilajun and several hill streams traverse the Pergunnah. The waters of all these streams are used for irrigating the lands through which they pass.

PERGUNNAH KOOTOOMBEH.

THIS is a highly cultivated and thickly populated Pergunnah, with an excellent soil, producing large crops of rice, wheat, barley, a limited crop of poppy and sugar-cane, vetches and other smaller grains. Its surface is level, with the exception of a few hillocks, and is generally cultivated and well irrigated. The lands towards the Sone have been much damaged by the drifting sand from the river Sone, but it is used for castor-oil and melons.

Kootoombeh has many substantial villages, which are Muhrajgunje, Nubbeenuggur, Tendooa, Malee and Suratoo.

Thannah, Nubbeenuggur.

Chokee, Mohawah.

Area in acres 196,301, beegahs 314,081-12, square miles 306.72.

Soil. Kewal and Pouroo, generally cultivated.

Roads. None that could be styled good. Footpaths following the angles of the rice-fields abound. A miserable apology for a road runs along the banks of the Sone river. Another from Muhrajgunje to Hoseinabad in Pergunnah Jupla.

Nullahs. A few nameless mountain torrents fall into the Sone.

PERGUNNAH JUPLA.

A LARGE portion of this Pergunnah is overrun with hill jungle and sand, the latter drifted up from the Koel and Sone rivers. To the South is a mass of hilly country occupying 20,480 acres. Jungle to the extent of 10,000 acres occupies the Central and Western portions of the Pergunnah, and about 8,300 acres of land are covered with sand; the rest of the Pergunnah is well cultivated, producing rice and wheat, junera and Indian-corn. The soil to the North is a good black Kewal, but to the South and West, the soil is harsh, dry, sandy and stony.

Large Towns, Hooseinabad, Hydernuggur, Lutpooree and Punsa, from each of which a noble view of the Table land of Rhotas to the West in Zillah Shahabad is to be seen rising to nearly 2,000 feet above the plain.

Chokees, Hydernuggur, Hoseinabad.

Area in acres 116,730, beegahs 186,768, square miles 182.39.

Soil. Kewal and Balsoondree.

Road. A road from Pergunnah Kootoombeh on the North passes through the Pergunnah to the South.

Rivers. Sone and Koel, on the banks of which are grown castor-oil plants and melons.

PERGUNNAH BHILOUJEH.

THIS Pergunnah is divided into two unequal portions by the river Koel, which traverses the Pergunnah from South to North, falling into the Sone on its Northern boundary. Of the large area contained in the Pergunnah only 100,000 acres are cultivated, the remainder, 201,646 acres, are occupied by hills, rocks, ravines, stony ground and jungle, none of which, or at least a very small portion, can ever be brought under cultivation. The produce of the valleys, between the hills, is rice, junera and castor-oil, nor did I see any other crops in the whole Pergunnah. On crossing the Koel river from the East, the features of the country appear perfectly different from the plains of Behar, a coarse red soil from the abundance of iron oxide in its composition appears, rocks and ravines take the place of the fine rich-grey or dark soil of the rice country, the palm tree ceases to be seen, the hills are clothed with the fragrant rhousa grass, lichens and ferns are also seen in the hills. The whole surface of the Pergunnah is undulating and covered with a thin jungle of the mimosa from which catechu is manufactured, cultivation is nowhere seen except immediately around the villages, and large droves of buffalos are seen grazing in the jungles.

The Sone river bounds the Pergunnah to the North, the waters of which are not used for irrigation, the banks being too high. The jungles are full of all sorts of wild animals,

large and small. A few years ago, the Gour, a huge species of wild cattle, were common in the Pergunnah, but they have been shot out or driven further South.

Chokee, Myheeanwan, on the banks of the Koel river.

Area in acres 301,646, beegahs 482,633, square miles 471.32.

Soil. In the valleys good black Kewal, all the rest of the Pergunnah a harsh, dry, stony and unprofitable soil.

Roads. A fair road runs along the banks of the Sone and leads to Mirzapoor on the Ganges. Another road leads up the Koel river to the Coal mines at Rajhurrah, distant from the boundary about thirty miles.

Rivers. Sone and Koel; down the latter, in the rainy season, the boats laden with coal are floated, pass into the Sone, which unites with the Koel on the Northern boundary, and eventually reach Dinapoor.

NOTE ON THE GEOLOGICAL FEATURES OF ZILLAH BEHAR.

The geological features of Zillah Behar may be divided into four great divisions, viz.:—the granite, the quartzose, the hornstone, and the sandstone.

Commencing from the Eastern boundary of the Zillah, where it abuts upon Zillah Monghyr, the hills are, in general, composed of confused masses of fatty quartz abounding with mica, which is generally found adhering to the quartz. In many places, fine veins of mica are worked and the produce exported to Patna. The principal mines are to the South of Rujoulee, both in the granite and quartz ranges. The country, at the foot of these hills, is thickly strewn with minute particles of silvery mica, brought down from the hills by the rains, and entering largely into the composition of the soil. Much of it is collected by the natives, and used for whitewashing their houses, ornamenting pottery, toys, &c., giving to the articles thus smeared, a lively sparkling appearance, and an unctuous feel; the roads and beds of Nullahs sparkle in every direction from the abundance of this mineral. Immediately on the boundary of Zillah Monghyr the granite peak named Kawa-Kho rises, from out of the quartz hills, to the height of 1,165 feet; another small patch of granite also appears about five miles to the South-West from the peak. The quartz hills are covered to their summits with forest trees, brushwood and bamboos, but as they advance to the Westward and become granite, they rise into bold and lofty peaks, some upwards of a thousand feet in height.

After leaving Rujoulee, the granite of these hills is found of every hue and texture that it is possible granite can possess or be composed of. In some places porphyritic granite is found, the individual component parts of which are enormous; in others eurite, where the individual component parts are undistinguishable from their minuteness, and in other places syenite is found. Also occasional masses of ponderous black mica are found scattered about in company with large masses of the grassy and fatty quartz so common to granite formations.

At the spot where the Calcutta Trunk Road crosses these hills, large blocks of gneiss are seen protruding from the fine black soil, and in most of the ravines and deep watercourses the same mineral is found. In the bed of the Mohunneh river, to the West of the Dunghye Ghat, on the old Calcutta Road, and where it issues from the hills, the water has laid bare a beautiful bed of gneiss several miles in extent, crossing the Behar boundary and entering Zillah Ramgurh: but from the great depth of soil and from the dense forest on the banks of the river, I was unable to trace how far it extends East and

West. In the Dunghye Pass, gneiss of peculiar beauty is scattered about in every direction. The summit of this Pass, at the village of Tillee Tand, I found to be 1,300 feet above the level of the sea: it is covered with thick forests, haunted by tigers, who destroyed some men of my establishment whilst engaged surveying these hills. A spur of this granitic range strikes off from the main body and suddenly terminates in the bold mountain, known as the "Muhair hill." The volcanic range of hornstone hills appears at this spot to overlay the granite, which again appears on the other side of the hornstone, distant about eight miles. This granite extends Westward to ten miles beyond the Kool river, or 120 miles from the mica mines at Rujoulee, varying in height from a hundred to a thousand feet: some of the peaks are bold and imposing, but much of this range is composed of a low, undulating and broken plateau of table land, especially the great mass which forms a spur from the Vindhyan mountains and lies in Pergunnah Sherghotty. This irregular mass, averaging from five to eight miles in width, is composed of coarse granite, covered with a dense jungle of underwood, intermixed with forest trees, affording an inexhaustible supply of the coarser wood, for building, manufacture of ploughs, yokes, sugar-mills, &c., besides yielding a plentiful supply of bamboos, grass, a variety of medicinal herbs, barks, roots, leaves and fruits which are collected at various seasons, and used in the Zillah or exported. The wild silk (tusser) is also collected from the asun trees (terminalia alata tomontosa) and exported. The principal tree is the saloogunje or sall, a tall handsome tree, with a smooth, shining white bark, high clear stem, wide spreading branches, and of a highly resinous nature, and from which a gum or rosin is collected and used as a varnish chiefly by the palanquin makers. This tree answers to the description of the North-Africa frankincense tree. The dhak tree, byre, kheir, mimosa and semul are the most common trees in these woods.

The samba stag (pusa), spotted axis, neelghaee, tigers, leopards, and a variety of smaller animals, inhabit the depth of these woods. At Deoree, a series of low hills are detached from the body of the Table land, and are much impregnated with veins of serpentine. Near the village a meagre bed of this mineral has been quarried for a few years by natives, who manufacture cups, knife-handles, &c., from the best specimens. Captain Richard Ouseley, Principal Assistant to the Governor General's Agent, South-West Frontier, had a shaft sunk, or rather a huge pit opened, in hopes of reaching a good bed, but without success. At the depth of thirty feet only a coarse friable granite was found; nor did I perceive in the sides of the pit any traces, by which hopes could be upheld, of ever finding any at that spot. Perseverance may perchance yet discover a valuable bed of this handsome mineral. Several slabs, three feet in length, were obtained by the Honorable E. Drummond, Magistrate of Gya, but being from the surface and much decayed, were good for nothing although very handsome both in colour and texture.

To the North of this great plateau, numerous little granite blocks are dotted over the plain, extending for twenty-five miles North, amongst which is the large Chirchawan hill, five miles in length; but to the North-East they extend for forty miles as far as the Burrabur hills, a range of black sterile granite rocks, in which are some very curious groups, peculiar to the granite formation; particularly that of Kawa-Dhole, a conical peak, rising to 365 feet in height, on the summit of which rests a conical block of granite of immense proportions, it is upwards of forty feet in height, standing on its base, without flaw or crack, a landmark for miles around.

On the summit of this group, iron ore of a rich quality, is scattered about in profusion. This is the most Northern point to which granite can be traced in Zillah Behar.

Returning to the West, a group of very curiously formed peaks are clustered together, six miles South of Kootoombeh. One in particular from its appearance is styled the

Kothila or granary. In these hills is found, in small quantities, the sulphate of alumina adhering to some of the rocks; it is styled silajeet by the natives.

The granite range, after crossing the Kool Nuddee, suddenly ceases in numerous small hillocks, and is here joined by the sandstone, an offset from the Kymoor sand and limestone range. Eighteen miles further up the Sone river, the granite again appears in one or two hillocks piercing the sandstone. After crossing the Koel river from the East, the country undergoes a complete change. The taltree (palm) becomes scarce, and eventually ceases altogether, the surface of the country becomes covered with the mimosa catechu, a few ebony trees and an abundance of saloogunje trees. The hills are clothed with the fragrant rhousa grass, from which a powerful spirit is extracted, so beneficial in rheumatism, and known in Malwa as "grass oil." The surface of the country is undulating, the soil tinged with bright yellow and red hues, the effects of the oxide of iron, which ore is found in its soil. The hills are low towards the North, and higher to the South, exceedingly steep to the South, and sloping away gradually to the North. The long range of hills, skirting the Sone river, are so steep to the South that a stone may be jerked from the summit to the base, but on the North the termination of their base is a mile removed from the plumb-line of their crest. Ten or fifteen miles South of the Sone river, on the table land of Oontaree, iron ore is collected and smelted by the Aghurreeas. Immediately under the ruined Fort of Srinugger, the waters of the Sone have denuded a series of nearly verticle strata of hornstone, arranged in narrow serpentine ribbons. This hornstone again appears about half a mile down the river at Darchdeh, and has the appearance of having been fused, being of a dark, pitchy hue, smooth, rounded, sonorous when struck, difficult of fracture and heavy. A belt of the same rock appears in the bed of the Sone jutting out from the Shahabad or North side, about two miles above Darchdeh: the rock at this spot has exactly the same burnt appearance. Embedded in this hornstone are found masses of a hard claystone of a bright-red colour, also common amongst the pebbles of the river, which pebbles generally consist of rounded peices of agate, hornstone or quartz, possessing but little beauty or variety. The rocks, at this spot, projecting more than half-way across the stream of the Sone, create rapids of about six feet fall in a quarter of a mile. At a village named Phoolwurreea, about four miles inland from the Sone, there is a spring of good water. At this spot a fair is held during the months of Kartik and Chait. At a spot (marked S.) in the sandstone a small quantity of alum is manufactured from alum slate, but by what process, I could not learn. Specimens of the slate were sent marked 359.

The natives call this sulphate of alumina, silajeet: it is the same substance as that brought from Nepal, and sold under the same name at the enormous price of one rupee the tola. The sandstone, on the Eastern and Western banks of the Koel river, is similar to that in which are situated the Rajhurrah Coal mines, eighteen miles from the Behar boundary, and is of various textures some exceedingly hard, others very soft.

The stone from the Khyra peak, which rises to 1,086 feet, is much used for handmills, currystones and for other domestic purposes. The whole of this sandstone is covered with a thin covering of forest trees, underwood and bamboos; the saloogunje tree predominating every where. The valleys are filled with the mimosa catechu, many hundreds of which trees are yearly destroyed in the manufacture of the catechu.

The next group is that of the hornstone, or Rajgheer range of hills, which although slightly mixed with quartz and jasper, must, nevertheless, be considered as a hornstone range. The hornstone is of both kinds, conchoidal and woody: the former is found of endless varieties, bright-red, purple-blue and other lively colours, uniting to render this an elegant stone: the latter is universally of greyish-green colour. This double range of hills presents a series of ragged peaks, offering views of great beauty. Their extent is about

forty miles from South-West to North-East. A small hill, evidently a portion of the range, appears at Behar; another small hill, about eighteen miles due East of Gireeuk, and another again twelve miles to the South, uniting with the quartz range and granite peak of Kawa-Kho. In this range, are numerous hot and cold springs, especially at Rajgheer, where there are nineteen hot wells and four cold. On the Southern face of the hills, there are a few hot springs similar in character to those of Rajgheer.

Half-way between the Rajgheer and Burrabur hills is situated a collection of hillocks, from which is quarried hornblende of a beautiful texture; the crystals are large and glossy; also a quantity of potstone or chlorite which is much used at Gya by the natives in the manufacture of dishes, plates, mortars and pestles, likewise by the image cutters, who are famous for the elegance of their carvings. A small quantity of this same stone, but of an inferior quality, is quarried from the Bruhmjoonee hill, overhanging the city of Gya. A small hill, west of the station of Gya, yields an undurated reddle, used for dyeing clothes, of an orange colour, also for metalling the roads in the station. This mineral is either of an orange, purple, light-red or yellow colour.

NAMES of the principal trees, shrubs, plants, roots, gums, barks, petals, &c. &c. found in the Southern Forest, with their uses, &c.

No.	Names of Trees and Shrubs.	How used in the Zillah.
1	Asun, terminalia alata tomentosa, tree, ...	Furniture, silk-worms producing tusser fed on its leaves, ploughs, door-posts, much used for surrounding houses to protect the inhabitants from wild animals, and to form a support to the sem bean.
2	Aoula, or amla, kind of myrobalans phylanthus emblica, tree, ...	Fruit, acid and used medicinally, also as pickles, preserves and chutnee.
3	Am, mango, mangifera Indica, tree, ...	Ploughs, yokes, timber for rough work, planks for doors, sugar mills, fruit well known as delicious, kernels used as food by the poor, scarce in the forests.
4	Aheens, a low, thorny, wide-spreading tree, ...	Decoction of roots used for rheumatism.
5	Aujun, tree, ...	Palanquins, chairs, beams, rafters.
6	Asoog, alvavia longifolia, tree, ...	Firewood.
7	Arkoon or madar, asclepias gigantea, plant gigantic, two kinds, one with a white flower and red inside, the second with white flower,	Bark of white blossomed species used for leprosy with great effect,—milk used for sores, ulcers.
8	Bur, or burgut, banian tree, ficus Indica, ...	Trees of this description are met with in these forests of great size, and beauty, leaves afford food to elephants and camels, figs eaten by the poor, firewood, milk used for ulcers, sores, &c.
9	Babool, mimosa Arabica, tree, ...	Scarce, ploughs, upright beams for sugar mills, tent pins, cart wheels. gum used in ink, dyeing, &c.
10	Bijeesar, tree, or puhsar, ...	Handsome dark wood. musical instruments, furniture, rafters, ploughs, yokes, decoction of roots used for fomenting in pains, known as Indian rosewood.
11	Byre, ziziphus jujuba, tree and shrub, ...	Ploughs, bedsteads, fruit eaten, leaves eaten by goats, sheep,—a single leaf masticated in the mouth allays severe thirst.
12	Bhilounun, a tree, ...	A hard, close-grained wood, chairs, tables.
13	Bhoorkoond, tree, ...	Scabbard for swords.
14	Bumar, tree, ...	Heavy yellow wood, doors, posts, beams, planks, measuring 5 feet in width, can be obtained from this tree.
15	Bamboo, (male or solid kind only,)	In abundance, and from which is obtained the banslochun, a species of manna, much sought after by natives as a restorative.
16	Bél, tree, wood-apple, ...	Highly scented woody apple, used in lime by masons, eaten by the poor.
17	Chuteeyin, tree, ...	Firewood.
18	Chirounjee, tree, chirounjia sapida, ...	A pleasant fruit, whose kernel is used in sweetmeats, piyar, name of fruit.
19	Dha, tree, grislea tomentosa, ...	Yokes, door-posts, a large tree.
20	Dhamin, tree, ...	Supple wood for bows, beds, banghys, buggy shafts, spear shafts.
21	Dutora, shrub, stramonium, thorn apple,...	Seeds smoked for asthma.
22	Duthora, shrub, ...	Fruit eaten.
23	Goorich, creeper, ...	Its tendrils are pounded and used as a tonic.
24	Goorich, tree, ...	Yellow wood, coarse work of all kinds.
25	Gooler, tree, ficus guleria, ...	Fruit eaten, firewood. A peculiarity in this tree is that its fruit grows immediately from the bark of the branches and main stem of the tree as well as from the twigs and tender shoots.

No.	Names of Trees and Shrubs.	How used in the Zillah.
26	Gumbhar, tree, ...	A yellow wood, musical instruments, drums, furniture.
27	Googul, tree, amyris agallocha, ...	Yields a resinous gum, the bark from its immense circumference is used in wells to prevent the earth falling in during the process of digging.
28	Ghila, creeper, mimosa scandeus.	
29	Goorkhundee, creeping shrub, ...	Has a sweet fruit which is eaten, root medicinal as a cooling decoction.
30	Hura, plant, (?)	An astringent nut (myrobilan) terminalia chebula.
31	Hurpharauree, shrub, phylanthus cheremela, ...	Yields an acid fruit.
32	Hurdooa, tree, ...	Wood used for making toys, boxes, &c.
33	Imlee, or tamarind tree, tamarindus Indicus, ...	Scarce, fruit eaten, used in sherbet, &c., leaves used in fomentations, wood used for building purposes, tent pins and a variety of purposes, tent pins made of tamarind wood soon rot from moisture.
34	Jamun tree, engenia jambolana, ...	Fruit (a plum) eaten, timber used as foundations to pukha wells, ploughs.
35	Jumwan, tree, ...	Long and straight beams.
36	Jethee mudh, shrub, liquorice, ...	Plentiful.
37	Kuchnar, bauhinia variegata, tree, ...	Very dark foliage, beds, turning ploughs, wood very like box-wood.
38	Kendoo, see tendoo.	
39	Khohwa, tree, ...	Palkees, wheels, doors, door-posts.
40	Keeondee, tree, ...	Palkees.
41	Kheir, tree, mimosa catechu, ...	The forests abound with this tree, which is seldom allowed to attain its full size, being cut down for the manufacture of catechu, or as it is erroneously termed terra japonica; the juice being separated from the wood by boiling is inspissated, made into cakes and exported to all parts of India. Thousands of these trees are ruined yearly by the herdsmen felling all available branches for the use of their buffaloes who greedily devour the leaves and tender shoots.
42	Kudum, naudea Orientalis, tree, ...	Firewood.
43	Kurunj, tree, ...	Yields a medicinal oil, which is also burned.
44	Khor, tree, ...	Large dark-coloured wood used for furniture.
45	Koosum, tree, ...	Very tough wood used for uprights for sugar and oil mills.
46	Kurin, tree, (very large,)...	Doors, posts, beams, rafters, yields a heavy yellow wood, planks 5 feet in breadth.
47	Karee, large tree, ...	Heavy wood, tough, light colour, umbrella sticks, rafters, door-posts, beams.
48	Kurhur, tree, ...	A medicinal oil is extracted from the fruit, firewood.
49	Kujh, large tree, ...	Heavy, light-coloured wood, rough work, firewood.
50	Kuchla, strychnos nux vomica, ...	Said to be plentiful but was not met with, probably from not being familiar with its appearance.
51	Kuchnar, or kuchnal, or kuchnari tree, bauhinia variegata, ...	Petal used as a vegetable, wood hard and useful to turners.
52	Kumrukh, tree, ...	Fruit is eaten.
53	Kunoda, small tree, ...	Sweet, fruit is eaten, firewood.
54	Koombhee, large tree, ...	Bark used by the Coles as clothing, also for slow matches to matchlocks, for the manufacture of coarse paper, firewood.

55	Kukor, tree, ...	Firewood.
56	Kowa, or urgun, large tree, terminalia glabra.	Carts, door-posts.
57	Kawit, a wood-apple, feronia elephantum.	
58	Koonjee, large handsome tree, sterculia ureas, ...	Has a peculiar bark similar to the beech, the gum named kuteela or kuteera, is a well-known drug in the stable as a cooling draught : a name written with a style or any mark made on the exterior bark will be communicated for many succeeding years to the numerous coats of bark underneath, which are constantly peeling off: this tree is generally found associated with the saloogunge, which it much resembles though a far handsomer tree.
59	Kuthur, orto-corpus integri folia, jack tree, ...	Bears a large oblong fruit with a peculiar smell, much eaten by the natives, useful, tough yellow wood for furniture.
60	Mahoa, bassia latifolia, tree, ...	Yields a hard and heavy, red, tough wood, of immense strength and durability, used for koolhoo (sugar mills,) beams, door-posts ; its petal is large and fleshy, yielding an edible oil (koeuree) which is also burnt and rubbed on the body ; from the petal is also extracted a powerful spirit ; petals are dried and eaten ; the appearance of the "morning shower" of petals which takes place just before sunrise is most striking ; bears, deer, and cattle devour with avidity the petals whenever they can get them ; these trees are very valuable to the ryots who manage by the sale of the petals to merchants, who visit these forests yearly, to pay their ground-rent, though they may not have cultivated an acre of ground during the year.
61	Myre phool, vangueria spinosa, ...	Yields a medicinal fruit.
62	Neem, melia azedirachta, scarce, tree, ...	Juice given to lepers, gum used in dyeing, also in ink, wood used for ploughs, door-posts.
63	Plas or prass, or dhak tree, ...	Very abundant, from the blossom (tesu) is obtained a yellow dye, from roots a substitute for rope, used for tying on thatch to houses, leaves used by natives as plates for food ; the flower of this tree, when in full blossom in April, is gorgeous beyond description ; when for miles and miles the forest is dressed in its scarlet livery.
64	Peepul, ficus religiosa, tree, ...	Scarce, firewood.
65	Pakur, ficus venosa, tree, ...	Very similar to the pepul.
66	Puhsar or Bijeesar, (which see).	
67	Panum, large tree, ...	Ploughs, carts, chairs, &c.
68	Phool dhooee, tree, ...	Petals eaten as a cooling diet.
69	Purmee, large tree, ...	Firewood, coarse fibred wood.
70	Pondhar, tree, ...	Fruit eaten, firewood.
71	Pitonjeea, tree, ...	Mashed fruit cures the itch.
72	Phalsa, tree, greewia Asiatica, ...	Bears a fruit somewhat like a black currant, common on all the hills and much eaten ; kernels of fruit used in sweetmeats.
73	Ritha, tree, sapindus saponaria, or soapwart, ...	The nuts are used as soap by washermen.
74	Rengui, a medicinal herb, ...	Used in fevers and for hastening a lazy sore to suppurate.
75	Sal or sankhoo, large tree, shoreea robusta, ...	Door-posts, furniture, all building purposes; the fruit "surey" eaten by the poor during times of scarcity.
76	Sagoon, teak, tectona grandis, ...	Very scarce, valuable for all building purposes.
77	Shissum or sissoo tree, dalbergia sissoo, ...	Valuable for all building purposes, scarce.

No.	Names of Trees and Shrubs.	How used in the Zillah.
78	Sitsaul, tree, ...	Scarce, handsome reddish wood, for furniture of all kinds, ploughs, yokes, for building purposes.
79	Siris, tree, mimosa siris, ...	A decoction of leaves used for sore eyes, firewood, plentiful.
80	Semul, tree, bombax heptaphyllum, ...	One of the handsomest trees in the forest, yields a soft silky cotton about March, which bursting from, a large green pod produced from a gorgeous scarlet flower, covers the ground far and near with its silky produce, the cotton from its great elasticity cannot be spun into thread, it is merely used for stuffing bolsters and cushions, the stem of the trees are scooped out and made into large canoes. The wood is of an yellow colour, light, and spongy, the girth of some of the stem of these trees reaches to 60 and 70 feet, firewood, coarse work.
81	Saloogunge or salee, tree, ...	A tall, handsome, smooth white-barked tree, occupying about 75 per cent. of the whole Southern jungles, especially on all the hills, is highly resinous, yields a fragrant gum called by the hill men looban or frankincense which it is not, but may be a variety of that gum, the wood burns readily, the wood is extensively used for making toys at Patna and other large cities and towns, turners are sent into the jungles by the toy makers, who manufacture the toys from the newly-felled trees and the articles so manufactured are conveyed away on bullocks. A peculiarity attached to this wood is, that although turned into delicate thin plates and cups when in its wet state, and perhaps containing 10 per cent. of its weight as moisture, it does not crack in drying.
82	Seemul, a plant, ...	Producing a long root, scarce and much valued for its tonic and strengthening properties.
83	Sithour, ...	Ditto ditto ditto.
84	Sidh, tree, ...	Used for ploughs, cart wheels, carts.
85	Sohujna, tree, guilandina morunga, ...	The root and peel next to the alburnum used as horse-radish which it closely resembles.
86	Tendoo or kendoo, tree, ebony, diospyros ebenum, ...	Very plentiful all through the forests though it seldom attains to any large size, ploughs, building, rafters, its astringent fruit is eaten by the poor in times of scarcity and in many cases proves fatal, the ebony or black wood is obtained from the heart of the tree and occupies about one-fourth of the diameter of the whole tree.
87	Toon, tree, cedrella toona, ...	Used for furniture, a handsome and elegantly-veined wood, the mahogany of India, petals valuable as affording a bright-yellow dye, and from the seeds a green colour is extracted.
88	Tal, palm tree, ...	Fan-leafed palm tree, borrassus flabelliformis, wine, spirit, fruit, rafters, beams, watercourses and drains, from the leaves fans, thatch for houses, drinking cups, baskets, mats.
89	Thalmovlee, plant, ...	Root used as a tonic.
90	Umaltas, tree, cassia fistula, ...	Bears a handsome cluster of yellow flowers and a long pod containing a purgative pulp, very hard wood, used for furniture, ploughs, door-posts.

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